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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,845	05/31/2005	Mark Thomas Johnson	NL 021322	6221

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EXAMINER	
CHOWDHURY, AFROZA Y	
ART UNIT	**PAPER NUMBER**
2629	
MAIL DATE	**DELIVERY MODE**
09/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/536,845	JOHNSON ET AL.	
	Examiner	Art Unit	
	Afroza Y. Chowdhury	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/31/2005, 10/19/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. JP 60223225 in IDS is not a US Patent and should be listed under foreign patent section in IDS. It is not considered since there is no an English translation is not provided.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The disclosure is objected to because of the following informalities:

Fig. 6 is not described in the Description of Drawing.

Appropriate correction is required.

Claim Objections

4. Claims 7-13 and 21 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims 4-6 and 17-20. See MPEP § 608.01(n). Accordingly, the claims 7-13 and 21 not been further treated on the merits.

5. Claim 1 is objected to because of the following informalities: ".....applying to a light emitting element a voltage within a specified voltage range, within which the risk of short circuits between the electrodes is reduced, and.....".

It would make more sense if it is rewritten as ".....applying a voltage with a specified voltage range to a light emitting element, within which the risk of short circuits between the electrodes is reduced, and....."

Appropriate minor correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-6 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kawase et al.** (EP 1225557) in view of **Moller et al.** (US Patent 6,984,934).

As to claims 1 and 14, Kawase et al. discloses a method for driving an organic LED display device having a plurality of light emitting elements (figs. 1, 3, col. 13, [0065] – [0066]), said method comprising:

applying a voltage with a specified voltage (col. 33, [0174] – [[0175], col. 34, [0182] – [0183]) range to a light emitting element (fig. 3(32)), and

controlling the duty cycle (col. 25, [0132]) of said light emitting element (fig. 3(32)), so that a desired light intensity (col. 28, [0156]) is emitted from said light emitting element (fig. 3(32)).

Kawase et al. does not explicitly teach reducing the risk of short circuits between the electrodes of an organic LED (OLED) and the structure of an OLED and a first and a second electrodes sandwiching an organic layer.

However, it is obvious to one skill in the art that in order to reduce the risk of short circuits between the electrodes, voltage needs to be applied within certain range.

Moller et al. teaches an organic LED display device having a first and a second electrode sandwiching an organic layer (col. 3, lines10-15).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to combine OLED structure of Moller et al. with the display device of Kawase et al. to make an organic LED device with a desired light intensity capability and bright image.

As to claims 2 and 15, Kawase et al. teaches a method where the duty cycle of said light emitting element is decreased in order to emit a desired light intensity without requiring an applied voltage below a specified lower limit (col. 34, [0181] – [0182]).

As to claims 3 and 16, Kawase et al. teaches a method wherein a default duty cycle of said light emitting element is less than 100%, and wherein said duty cycle is increased in order to emit a desired light intensity without requiring an applied voltage above a specified upper limit (col. 34, [0181]).

As to claim 4, Kawase et al. discloses a method comprising: determining an expected voltage change over time, required to maintain a constant drive current in said light emitting element, and adjusting the duty cycle of said light emitting element accordingly (col. 34, [0181] – [0182]).

As to claim 5, Kawase et al. teaches a method comprising: monitoring an average pixel voltage in the display, and adjusting the duty cycle of each light emitting element in accordance with this average voltage (col. 33, [0176]).

As to claim 6, Kawase et al. teaches a method comprising: monitoring a voltage of a light emitting element, and adjusting the duty cycle of said light emitting element in accordance with this voltage (col. 33, [0174]).

8. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kawase et al.** (EP 1225557) in view of **Moller et al.** (US Patent 6,984,934) and in further view of **Sanford et al.** (US Pub. 2002/0195968)

As to claim 17, Kawase et al. (as modified by Moller et al.) discloses a display device with a controlling the duty cycle (fig. 1) and applying a target voltage corresponding with a target luminance (col. 33, [0174] – [0175], in Kawase et al.).

Kawase et al. (as modified by Moller et al.) does not teach transistor level circuit connection for voltage applying means.

Sanford et al. teaches a device wherein controlling means comprises a transistor (fig. 1(Q 120)) connected between the light emitting element (fig. 1(OLED 120)) and the voltage applying means (fig.1), and a duty cycle controller connected to the gate of the transistor (fig. 1).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to combine OLED of Sanford et al. with the display device of Kawase et al. (as modified by Moller et al.) to make an organic LED device with a desired light intensity capability.

As to claim 18, Sanford et al. teaches a device where controlling means comprises a duty cycle controller connected to the voltage applying means (fig. 1).

As to claim 19, Sanford et al. teaches a device wherein said controlling means comprises a duty cycle controller connected to the other side of the light emitting element (fig. 1(OLED 120)) in relation to the voltage applying means (fig. 1).

As to claim 20, Sanford et al. teaches a device where voltage applying means comprises a power line (Fig. 1(Vdd)) and a drive transistor (fig. 1(Q 102)) connected between the power line and the light emitting element (fig. 1(OLED 120)).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afroza Y. Chowdhury whose telephone number is 571-270-1543. The examiner can normally be reached on 7:30-5:00 EST, 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC 9/14/2007

AMARE MENGISTU
SUPERVISORY PATENT EXAMINER